DOCUMENT RESUME

ED 418 282 CE 076 210

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TITLE Implications for Vocational Education Research of Some German Views on the Nature of Interests.
PUB DATE 1998-00-00
NOTE 16p.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Career Choice; *Educational Research; Foreign Countries; *Occupational Aspiration; Postsecondary Education; Secondary Education; *Vocational Education; *Vocational Interests
IDENTIFIERS *Australia; *Germany

ABSTRACT

The purpose of this paper is to introduce some views from the Munich school of interest to vocational education contexts. Recent theorizing on interests sees them as a relation between a person and an object and distinguishes this relationship from situational or more transient interests. This view focuses on the nature of the process of being interested and defines intrinsic interest in terms of cognitive, value, and emotional components. Overall, there is substantial support for the role of interests, both as a hypothetical construct and intervening variable, in vocational education and this is consistent with theorizing and research in other fields of education and psychology. The findings of Australian research are consistent with the emphasis provided by these modern German theories on the role and development of interest in learning. Finally, there is substantial scope to extend links between interests and motivational concepts such as task-involvement, intrinsic motivation, attribution theory, expectancies, self-efficacy, expertise, and interest in vocational education. (Contains 48 references.) (Author/KC)

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IMPLICATIONS FOR VOCATIONAL EDUCATION RESEARCH OF SOME GERMAN VIEWS ON THE NATURE OF INTERESTS

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ABSTRACT

The purpose of this paper is to introduce some views from the Munich school of interests to vocational education contexts. Recent theorising on interests sees them as a relation between a person and an object and distinguishes this relationship from situational or more transient interests. This view focuses on the nature of the process of being interested and defines intrinsic interest in terms of cognitive, value and emotional components. An attempt is made to (a) evaluate and complement this view with the results from Australian studies on the determinants of classroom interests in order to produce a holistic concept of this psychological domain and (b) outline implications for vocational education research.

IMPLICATIONS FOR VOCATIONAL EDUCATION RESEARCH OF SOME GERMAN VIEWS ON THE NATURE OF INTERESTS

Intra-personal domains such as interests, together with aptitudes and values offer a valuable basis for understanding a learner's behaviour. They are widely recognised as being important for educational and vocational choices but also as a component of learning and instruction. This is because the pattern of an individual's likes and dislikes, for example, his/her outdoor, practical, scientific creative, business, clerical or people contact interests are key components of educational choices and vocational adjustment. To illustrate this, three actual case studies were drawn from over 900 in a study of Australian vocational education students (Athanasou, 1996). At the outset, they illustrate some of the idiosyncratic impact of subject preferences on the dynamic interaction between each person and aspects of their learning situations.

Case study 1. Mary K. is a teenager whose career interests centre around people contact (i.e., helping and advising others). Although her first choice of career would have been a primary school teacher, she is now employed as a hairdressing apprentice and undertaking a trade course concurrently on a one-day per week basis at a suburban technical college. She likes this course and is undertaking it because it is related to her employment. This semester she is taking five subjects. Hair colouring is her favourite subject and generally she thinks that it is second most important in terms of relevance, importance, quality of teaching and she would say that it is her second best subject. Out of all her subjects, she rated it second most in difficulty and she said that it takes up a reasonable amount of time for study and homework. Her experience of studying at a technical college was described as: "I prefer studying at TAFE much better than at school because I am doing a course that I like and enjoy. I find that my results are much better here at TAFE than they were at school simply because of this reason".

Case study 2. Jospeh C., is an adult student in his late twenties with high career aspirations. His first choice of career is "director or executive" and he is enrolled in the second stage of an accounting associate diploma course. This is his first choice and he likes the course. He is enrolled in five subjects this semester and described his experience of studying at a technical college as "...a step to my goal". One of the subjects he has to take is Commercial Law II, which is his least favourite. He thinks it is his least relevant, least important and he spends the least amount of time studying for it and on homework for this subject. He said that it is his third easiest subject but second best overall. He rated it as fourth out of his five subjects for quality of teaching.

Case study 3. Susan B. is in her early twenties and rates practical or technical career interests as her priority. She completed year 12 at high school before enrolling in the electrical technology trade course as part of her employment. She likes the course and is studying eight modules this semester. Her experience at a technical college was described as "...I do more practical than theory ... [the] teacher helps us a lot with tutorial" (*sic*). She thought it was her second most relevant, second most important, her third best and second most demanding in terms of studying and homework. She rated it as her most difficult subject out of the eight she is studying this semester.

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As far back as 1913, Dewey described the value of such interests for learning but interests have often been relegated in educational research status. It was Hidi (1990), who characterised interest as a mental resource for learning but Krapp and Schiefele (1986, p.19) had earlier considered that the "... interests of adults are powerful parts of their identity as well as their intellectual capabilities". Moreover, Snow and Swanson (1992, p.601) indicated that the "...effects of interest differences on learning rival those of ability differences". Certainly, enough evidence has accumulated for us to assert with confidence that cognitive performance improves with personal interest (e.g., Asher, 1979; Estes & Vaughan, 1973; Marton & Saljo, 1976, 1984).

The concept of interest may not only be necessary to understand how some information is selected, processed and retained in vocational education settings but also how subject-matter oriented interest is an important variable in the outcomes of technical and further education. Despite the theoretical and practical importance of interests, there has been little application in vocational education contexts. The purpose of this paper is to summarise some recent German developments in the concept of interests and to indicate how they might find application in vocational education and training.

Background

It is not always the case that interests have been considered as important for educational psychology as they have for vocational psychology where they form the foundation of many theories of adult career development in Australia (Athanasou, 1988, 1990, 1993). Nor have they been included in many discussions of human motivation, which often restricts itself only to goal-directed behaviour. Indeed, there are many educational texts that do not make any reference to this term.

When motivational theories seek to account for human learning they do so in terms that are often related to interest. For instance, in attribution theory success or failure can be ascribed to task relevant factors (Weiner, 1979). Additionally, Deci (1971) has studied the role of intrinsic motivation and its impact on interest under different reward conditions. Interests are seen as having a directive function and Deci and Ryan (1985) have established the conditions under which high intrinsic motivation may be undermined by the inappropriate use of rewards. Ames (1984) has distinguished between the conditions of task-involvement and ego-involvement. Interest,

effort and attempting to learn have been related to task-involvement and contrasted with ego-involvement, which focuses on out-performing others.

With the exception of intelligence more is known about interests than most other traits and although the conceptions of interests have varied they have remained reasonably consistent in their affective focus. They have been defined (see Athanasou, 1994) *inter alia* as:

- intervening variables mediating between "... a person's consciousness and his actions ..." (Dewey, 1913, p.21);
- intrinsic interests or predispositions that "... connect certain responses with certain situations, and by modifying these connections when they have occurred ...." (Thorndike, 1935, p.47);
- a term employed in two senses, functional and structural; (1) designating a type of feeling experience, which might be called 'worthwhileness', associated with the attention to an object, or course of action; (2) an element or item in an individual's make-up either congenital or acquired, because of which he tends to have this feeling of 'worth-whileness' in connection with certain objects or matters relating to a particular subject, or a particular field of knowledge..." (Drever, 1963, p.140);
- "an enduring attitude which engages the individual's attention to make it selective toward the object of interest; the feeling that a certain activity, avocation, or object is of worth or significance to the individual; a state of motivation or set, which guides behaviour in a certain direction or toward certain goals" (Chaplin, 1975, p.266);
- an affective state (Hidi & Baird, 1986);
- a "... specific relation between a person and an object" (Schiefele, Krapp & Winteler, 1988, p.5); or,
- part of intrinsic motivation, when "... people engage in activities that interest them, and they do so freely, with a full sense of volition and without the necessity of material rewards or constraints" (Deci, Vallerand, Pelletier and Ryan, 1991, p.328).

Recent years have seen a revival of the concept of educational interest from both German and North American researchers (see Renninger, Hidi and Krapp, 1992). Krapp (1993) and U. Schiefele (1991) have built upon a tradition of German research (e.g., H. Schiefele, 1974) that is characterised as a Munich view of interests and attempted an integration of interest, learning and motivation. Interest is seen as: content specific; directive; a factor in the subjective theories of teachers; the valences attached to a topic or activity; related to modern cognitive theories of knowledge acquisition; and

more amenable to influence than motives. Interests are viewed as a construct which defines a "... specific relation between a person and an object" (Schiefele, Krapp & Winteler, 1988, p.5). Interests offer meaningful descriptions of the direction of a person's efforts and some aspects of his/her response to learning. They are important inferences from behaviours which are worthy of empirical study and which are now being documented in their own right.

Individual and situational interests

Renninger, Hidi and Krapp (1992) stressed the role of interest in learning and development in a key collection of papers. These outlined two conceptions of interest as individual and situational. One way to investigate interests is to concentrate on the interestingness in a situation and how that influences learning or performance (Hidi, 1990). A second way is to consider longstanding personal preferences and look at their contribution to learning or work. Such individual interests always involve stored knowledge and value. They may or may not be behaviours of which the individual is aware. These distinctions will be explored briefly in the following sections.

Situational interest

Text-based interest is an instance of situational interest. Interest-based activities are seen as motivating, and involving attention, concentration, persistence, increased knowledge and value. Attention is attracted to properties of the environment such as novelty or complexity, with such interestingness playing a role in comprehension (eg, Schank, 1979) and recall of information from texts (eg, Kintsch & Bates, 1977). Renninger (1992) found increased memorisation of information and key ideas for texts in which students had an interest compared with those for which there was no interest.

Hidi (1990) suggested that there are distinctive variations in cognitive processing that accumulate with interest and that the processing of interesting information may involve the locus coeruleus and/or specific neurophysiological activities within the right hemisphere (Zajonc, 1980, p.169). Overall it was hypothesised that situational interests are the precursors of individual interests and preferences. It may also be theorised that both types of interests may occur simultaneously as influences on learning and development. Of equal concern, however, is the development of an enduring and long-term interest in a person and this has also been the focus of attention.

Individual interest

Schiefele (1991) and Krapp (1993) have outlined a detailed person-object conception of individual interest. In this model (see Figure 1) a feature of human personality is the relatively continuing relationships of a person with an object that generalise across different situations. Interest goes beyond the short-term, attentional process described earlier and refers to the person-object relation that is of personal significance and that can be distinguished from other person-object relations.

The relationship is expressed as an action(s) of interest where the person is engaged with the object or extends the object-specific knowledge, experiencing this as (a) a positive emotion, (b) intrinsically determined and (c) intentional (i.e., with attached values and resulting intentions). The object of interest (i.e., real objects, activities, subjects etc) represents subjectively determined parts of the environment with varying degrees of value. This can be described at different levels of abstraction with the more general levels being easier for communication about interests. Among 80 male defence force students, Schiefele and Krapp (1996) reported that topic interest was significantly related to the total amount of recalled ideas. The relation between interest and learning was considered to be independent of prior knowledge and intelligence (p.154) and this applied particularly in the early phase of learning with material of low difficulty.

A person-object model of interests

The present discussion on the construct of interest leans heavily on the work of Krapp (1993). He has emphasised how a theory is based on metatheoretical decisions about how the human being is viewed. In addition to interest as a relational construct, the other basic assumption adopted by Krapp related to the reflexive epistemological subject model in which it is assumed that a person has the ability to control rationally and intentionally what is done. Krapp has also added components of Deci and Ryan's (1991) self-determination theory to assist in explanation of long-term development. Here, the personality structure is perceived to have an inner core which develops self-concepts, self-esteem, coping and locus of control. According to Deci and Ryan (1991) this self is also a set of motivational processes. There is a propensity towards integration of the different parts of the personality in response to adapting to new situations (personal, social). Some specific concepts within this model are defined below:

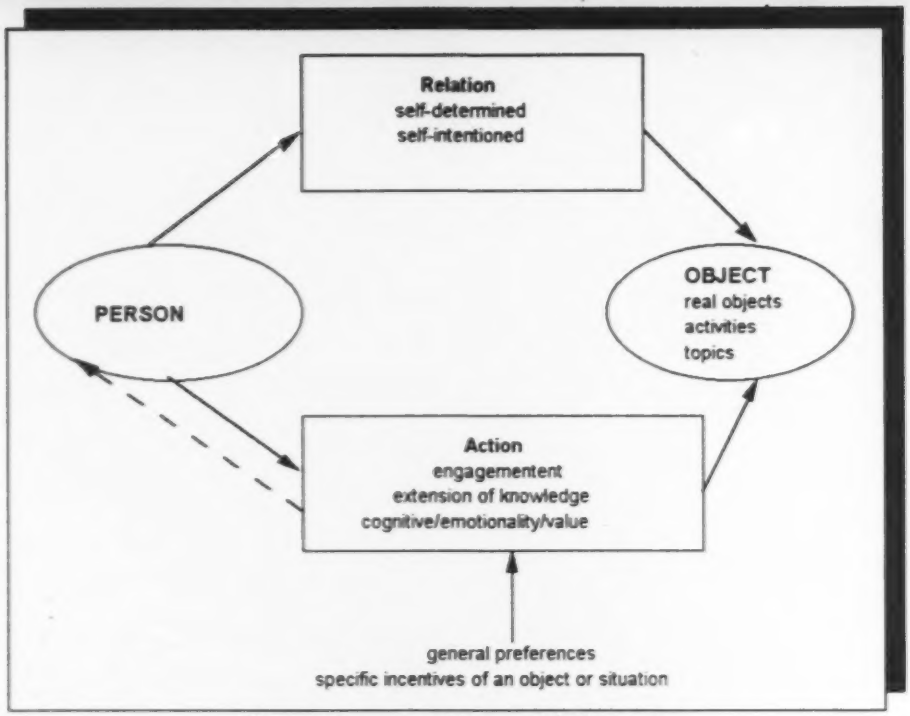

Figure 1. A person-object model of interests

- *Personal or individual interests* - the level of habitual or dispositional personality features.
- *Objects* - represent subjectively determined and distinctive parts of the environment, with varying degrees of significance or personal value.
- *Action of interest* - refers to behaviour with purpose and intention. Repeated engagement with an object stabilises the person-object relationship.
- *Interest* - refers to a person-object relation that is of outstanding significance and that can be distinguished from other person-object-relationships

The object of a personal interest can be described at various levels of abstraction. The more abstract the description of an object the easier is an intersubjective and in this sense "objective" communication about interests. In this way the accuracy of the object's description is at the same time reduced. Three general structural components may be used for the descriptive analysis of almost any object of interest: (a) real objects; (b) activities and types of engagement (e.g., the knowledge and competence to work on interest-related tasks); and (c) topics.

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The action of interest

In performing an action of interest, the person establishes a relationship with an object, engages with that object, extends the object specific knowledge. The action is experienced positively by the person and a special form of positive emotion is flow. A further important characteristic is the intrinsic motivational orientation, expressed as (a) self-determined locus of control, (b) self-intentional identification with the goals and demands of the current action.

The action of interest reflects the current relationship between a person and object. It has to be reconstructed from the behaviour. The cause of the action is either (a) the general preferences or generalised motives of a person or (b) the specific incentives of the object or the situation that make an object appear attractive.

An actualised interest is one that is primarily internally caused. It corresponds to an already existing (personal) interest. A situational interest describes an action of interest that is primarily caused by external objector situation-specific incentives. Every time a person actively interacts with the object of interest the person-object relation is modified. The action of interest has a cognitive aspect, emotionality and a value orientation.

Cognitive aspect - An action of interest does not necessarily require comparatively differentiated complex cognitive schemata. The assumption that the individual has a certain prior knowledge concerning the object of interest is sufficient.

Emotionality - An action of interest may be experienced positively because it satisfies the basic needs for competence, self-determination and social relatedness. According to Schiefele (1991, p. 309) the "state of interestedness is characterised by increased activation, positive emotions, increased intrinsic motivation and concentration". Under extremely convenient conditions flow may be experienced, that is, the feeling of total involvement with an activity.

Value orientation - under identical conditions engagement with the object of interest is preferred to other occupations. The intrinsic component of an action of interest may be characterised with regard to the person's experience and the fact that the intentions relevant to the action correspond to self-intentionality. With regard to the object of

interest the intrinsic component refers to the fact that intentions, activities and topics of an action are to a large extent determined within the subjective conception of the object.

To summarise, interest is a relational construct that is used to characterise a person's special relationship with content, topics, subjects or a domain. At a general level, interests can be analysed as a general willingness to act or in terms of the characteristics of a person and can be investigated at different levels of abstraction.

Interests and achievement

The practical importance of interests may lie in their correlation with performance in educational, social and vocational domains. There is consistent evidence throughout the educational domain that these individual or situational likes and dislikes may have the power to influence both the nature and extent of learning. Charry (1981) has outlined some findings from studies of students' subject preferences and subject marks. Some 85 years ago, Kelley (1914, p.32) reported correlations of .46, .33 and .3 between preference ratings and marks in English, History and Mathematics. Thorndike (1917, p.170) indicated a correlation of .89 between college grades and expressed interests and other studies have reported correlations of .33 to .76 (see also Wyman, 1926; King, 1931; Chauncey, 1932 - cited in Charry, 1981, p.4). Evans (1965, p.123) cited correlations ranging from 0.21 for English and Geography to .33 for Mathematics (see also Bridges and Dollinger, 1920). From a study of 121 independent correlation coefficients, the mean value of the correlation between interest and achievement was 0.31, with 0.35 for males and 0.25 for females (see Schiefele, Krapp and Winteler, 1992, p.202).

Interests and achievement in vocational education

There are a number of reasons why interests and achievement may be even more closely related in post-school education. A differentiation of interests and values occurs in connection with making a choice to undertake a course in technical and further education. Furthermore, interests characterise the greater degree of cognitive complexity related to the particular courses and subjects of interest (Gelder, 1982; Norman & Rumelhart, 1975). In other words, they might represent favoured ways of thinking (e.g. artistic, creative, enterprising) and Prenzel (1988) has demonstrated that college students who develop an interest (in computers) will re-engage and persevere in related activities.

The role of interests in vocational education has not been investigated widely. Wild, Krapp, Lewalter, Schreyer and Schiefele (1996) outlined a theoretical framework with preconditions, process variables and outcomes and tested this using an experience sampling methodolgy with insurance apprentices under the dual system in Germany. Males reported a decrease in extrinsic and intrinsic motivation to learn compared with the more stable motivation of female apprentices.

In Australia, Athanasou (1994) conducted an idiographic study of the interests of 1324 technical and further education students in Australia and reported that interests were important factors in educational achievement. Some 66% of students were best at the subject they liked and 58% were worst at the subject they liked least of all. Interests accounted for a great deal more of the effect size in ability than the quality of teaching. Some aspects of individual and situational interest were further investigated in a second study of 940 technical and further education students from some 20 colleges and 60 courses (Athanasou, 1996). The factors included, the importance of the subject, the relevance of the subject to students, whether it was their best subject, their easiest subject, the quality of teaching, the amount of time spent on homework and time spent studying. In addition to these factors, social and demographic variables along with vocational interests and course preferences were also investigated. The importance of this study was that it used a design in which subjects acted as their own controls. Results indicated that there were no effects of age, gender, mode of study (part-time or full-time) on the extent of subject interests. Ranking of interest was related more to factors such as the best and easiest subject, the most relevant and most important subjects. Quality of teaching, study and homework time had much lesser overall impact in producing a model of student interests (see Figure 2). The findings supported a view of interest as linked to ability and value within the person.

Recently, the cognitive, emotional and value components of student perceptions of interest were tested using a lens model analysis which focuses on the validity of perceptions and judgements (Athanasou, in press). Ten judges rated 108 student profiles obtained from 27 random experience samples of classroom interest in meteorology and management classes. Judges were provided with information about 17 characteristics of student responses and were highly reliable in their inter-trial reliability of judging interest (median = 0.83) The most important indicators of interest were perceived to be self-ratings of familiarity, confidence, happiness, effort, enthusiasm, enjoyment, desire, importance and freedom. The results supported the emotionality and

value components of learning in vocational education but not the knowledge emphasis and this was attributed to the fact that knowledge was being formed rather than being assessed at the conclusion of the activity (see Figure 3 for a brief summary).

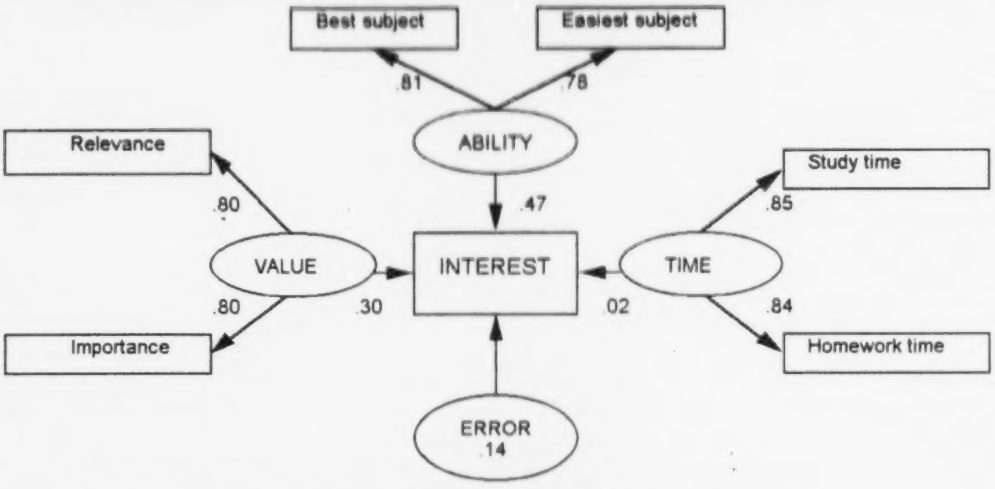

Figure 2. Hypothesised model of influences on student interest

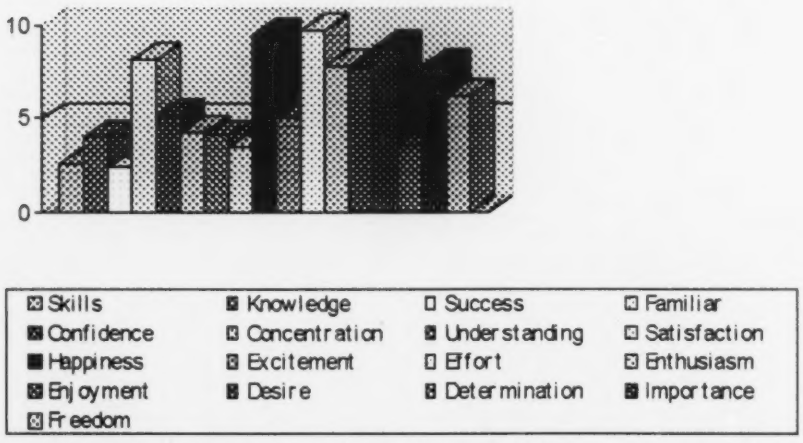

Figure 3. Average importance (relative beta weights) for components of interest

In other Australian studies, reference to interests has been indirect and in the form of dispositions that have been linked to learning in workplaces as well as to the development of expertise. Billett (1996) outlined two case studies of learning through participation in social practice in work contexts (coal mining and secondary processing plants). He concluded that in the construction of meaning "... personal dispositions need to be considered more adequately". In a later paper, he argued for the inclusion of dispositional attributes to account for expertise and this appears to be a promising area of research. Billett (1997) described 'dispositions' - in case studies of a painter, midwife

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and motor mechanic – that encompassed confidence, determination as well as "the interest that the subjects enunciated in maintaining and developing their knowledge" (p.36).

Discussion and conclusions

Overall, there is substantial support for the role of interests, both as a hypothetical construct and intervening variable, in vocational education and this is consistent with theorising and research in other fields of education and psychology. The formal expression of a structured theory of the nature of interest has provided a framework within which to further research the individual and situational components of interests.

It may be possible to speculate on some areas for future research which build upon this foundation. These include recent findings that support a heritability component in interests and what implications this might have for situational interests, learning and instruction. Another area of fruitful research is in eliminating the gender discrimination that arises from the differences that are a regularly observed finding in vocational educational choices and in most studies of the content of cross-gender comparisons of vocational interest. The natural evolution of interest in vocational education and the interaction between the cognitive, emotional and value components need to be explored in longitudinal studies. The links between the accumulated findings in vocational interests and the individual versus situational approach require clarification. For instance, it is not always clear how the dispositional view of interests that is a feature of vocational personality types interacts with the concept of individual interest. Australian findings on the strength of the relationship between ability and interest also require some explanation. The amount of shared variance implies considerable overlap in these constructs indicates that these are from a common psychological and psychometric domain. Recent research suggests that interests, personality and abilities tend to cluster together into four complexes: social; clerical-conventional, science-mathematics, and intellectual cultural (see Ackerman & Heggestad, 1997). This is consistent with a holistic view of the person in which personality, intelligence, aptitudes and interests ought to be intertwined.

By and large the findings of Australian research are consistent with the emphasis provided by these modern German theories on the role and development of interest in learning. While most research on interests in Australia has been in terms of

vocational interest typologies it is obvious that educational interests may also be considered as an area of future and fruitful research especially within the context of adult vocational education and training. Finally, there is substantial scope to extend links between interests and motivational concepts such as task-involvement, intrinsic motivation, attribution theory, expectancies, self-efficacy, expertise and interest in vocational education.

Acknowledgement

Preparation of this paper was supported by an internal research grant from the University of Technology, Sydney. Part of this work was completed while at the Universitat der Bundeswehr Munchen. An earlier version of this paper was presented at the, 5th Annual International Conference on Post-Compulsory Education and Training. Gold Coast: Centre for Learning and Work Research, Griffith University

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